

**Notice of Allowability**

Application No.

10/733,283

Examiner

Joseph L. Perrin, Ph.D.

Applicant(s)

KISHIMOTO ET AL.

Art Unit

1746

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 21 July 2006.
2. ☒ The allowed claim(s) is/are 50-54.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/736,499.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application  |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>20061002</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment  |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                         |
|  | 9. <input type="checkbox"/> Other _____.   |

## **EXAMINER'S AMENDMENT & STATEMENT OF REASONS FOR ALLOWANCE**

### ***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Nathaniel McQueen on 02 October 2006.
3. The application has been amended as follows:

#### **Claim 50:**

50. (Currently amended) A cleaning device to remove an unnecessary material from a film-coated board material to which the unnecessary material is sticking, wherein said film-coated board material comprises a board material and a film material as a mask bonded to said board material, said film material is bonded to said board material in a manner such that it can be removed from said film-coated board material, said unnecessary material is produced when a hole is formed in said film-coated board material, and said unnecessary material is sticking to said film-coated board material,

said cleaning device comprises a cleaning tank;

a cleaning solution provided in said cleaning tank;

a supersonic oscillator installed in said cleaning solution;

a feeding device which feeds said film-coated board material into said cleaning solution while retaining said film-coated board material; and

a means for selectively removing said unnecessary material from said film-coated board material without peeling said film material;

wherein said means for selectively removing said unnecessary material comprises ~~includes at least one selected from the group consisting of~~

~~(i) a water flow generator which generates a water flow between said supersonic oscillator and said film-coated board material located above said supersonic oscillator;~~

~~—— (ii) a diffusing plate installed between said supersonic oscillator and said film-coated board material located above said supersonic oscillator; and~~

~~—— (iii) a plurality of resonance control plates which hold said film-coated board material therebetween, and~~

wherein the plurality of resonance control plates include at least one plate which internally has at least either an air layer or bubbles.

**Cancel non-elected claims 55-66.**

***Allowable Subject Matter***

4. Claims 50-54 are allowed.

5. The following is a statement of reasons for allowance: The closest prior art of record, JP 10-224015 (JP '015), fails to teach each and every limitation of the instant invention. Specifically, while JP '015 discloses a cleaning device having a cleaning

tank, a supersonic oscillator, a feeding device, and plural plates, JP '015 fails to teach or reasonably suggest the claimed means for selectively removing unnecessary material from film-coated board material without peeling the film material such that the selective removing means includes plural resonance control plates holding the material to be treated therebetween and at least one of the plates having an internal air layer or bubbles. For at least the foregoing reasons, claims 50-54 are believed to recite patentable subject matter.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Perrin, Ph.D. whose telephone number is (571)272-1305. The examiner can normally be reached on M-F 7:00-4:30, except alternate Fridays.


8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Joseph L. Perrin, Ph.D.  
Primary Examiner  
Art Unit 1746

jlP